

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of scrubbing a halogen-containing gas stream, comprising:

~~contacting the gas stream with water at a temperature of at least 30°C-40°C for facilitating chemical reaction between the gas stream and the water at a temperature of at least 40°C; and~~

~~a further treatment step comprising contacting the gas stream with water at a temperature of less than 30°C for dissolving the gas steam in the water of less than 30°C.~~

Claim 2 (Cancelled)

3. (Original) A method according to claim 1, in which the water is in the liquid phase.
4. (Previously Presented) A method according to claim 1, in which the gas stream is contacted with water vapor.
5. (Previously Presented) A method according to claim 1, in which the gas stream is contacted with water at a temperature of from 35°C to 80° C.

Claims 6-7 (Cancelled)

8. (Previously Amended) A method according to claim 1, comprising diluting the gas stream with a diluent gas.

Claim 9 (Canceled).

10. (Previously Presented) A method according to claim 8 in which the gas stream is contacted with the diluent gas in a cyclone device.

11. (Previously Amended) A method of claim 1, comprising subsequently treating the gas stream in a cyclone device in which it is diluted with a diluent gas stream and withdrawing separately from the cyclone device solid particulate material and a treated gas stream.

Claim 12 (Cancelled)

13. (Previously Presented) A method according to claim 11, in which the diluent gas is air.

14. (Previously Presented) A method according to claim 11, in which the halogen-containing gas stream is an exhaust gas from semiconductor manufacture.

15. (Previously Presented) A method according to claim 11, in which in the water-

contacting step the gas stream is arranged to be in generally counterflow relationship with the water.

16. (Previously Presented) A method according to claim 15, in which in the water-contacting step the gas stream is caused to flow in a generally upward direction and the water is caused to flow in a generally downward direction.

17. (Previously Presented) A method according to claim 11, in which the halogen-containing gas stream is a fluorine-containing gas stream.

18. (Currently Amended) An apparatus for scrubbing a halogen from a gas stream, comprising:

 a hot wash scrubbing chamber in which the gas stream can be contacted with a hot wash flow of water,

 a water supply device for supplying to said hot wash scrubbing chamber water at a temperature of at least 30°C 40°C for facilitating chemical reaction between the gas stream and the water at a temperature of at least 40°C,

 a source of a halogen-containing gas for supplying to said hot wash scrubbing chamber a gas stream containing the halogen, and

 an outlet from said hot wash chamber for treated gas; and

 a cold wash scrubbing chamber downstream of said hot wash scrubbing chamber,

a cold water supply device for supplying to said cold wash scrubbing chamber water at a temperature of less than 30°C for dissolving the gas steam in the water of less than 30°C,

a communication pathway for transport of the treated gas from the outlet of the hot wash chamber into the cold wash chamber, and

an outlet for treated gas from said cold wash chamber.

19. (Cancelled)

20. (Previously Presented) An apparatus according to claim 18, further comprising a gas dilution unit in which the treated gas can be diluted with a diluent gas.

21. (Previously Presented) An apparatus according to claim 18, in which the source is a source of fluorine-containing gas.

Claim 22 (Cancelled)

23. (Previously Presented) A method according to claim 8 in which the diluent gas is air.

Claim 24 (Cancelled)

25. (Previously Presented) A method according to claim 1, in which the halogen-

26. (Previously Presented) A method according to claim 1, in which in the water-contacting step the gas stream is arranged to be in generally counterflow relationship with the water.

27. (Previously Presented) A method according to claim 1, in which the halogen-containing gas stream is a fluorine-containing gas stream.

Claim 28 (Cancelled)